February 3, 2012

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, DC 20549

Attention: John Reynolds
James Lopez

Re: Tonix Pharmaceuticals Holding Corp.
Current Report on Form 8-K/A
Filed December 27, 2011
File No. 333-150149

Ladies and Gentlemen:

The following responses address the comments of the reviewing staff of the Commission as set forth in a comment letter dated January 10, 2012 (the "Comment Letter") relating to the Amended Current Report on Form 8-K/A filed on December 27, 2011 (the "Form 8-K") by Tonix Pharmaceuticals Holding Corp. (the "Company"). The answers set forth herein refer to each of the staff's' comments by number.

The numbers of the responses in this letter correspond to the numbers of the staff's comments as set forth in the Comment Letter.

Business Overview, page 4

1. It appears that you have not provided the overview as to the anticipated timeline and costs for each of your products to reach commercialization as you state in response to prior comment 5. Please provide such an overview as requested in our prior comment. Ensure your revisions also address your other principal products.

Response:
We have considered the staff's request to further supplement the information provided regarding the anticipated timeline and costs for each of our products to reach commercialization. We believe that a more robust response at this early stage in response to the staff's request seeking "anticipated timeline and costs" for "each of your products to reach commercialization" ignores the inherent unpredictability factors associate with drug development and commercialization. Our prior response is believed to be complete and as accurate an estimate that can be provided at the present time without providing potentially false and misleading information in the filing. As such, management of the Company does not believe it is appropriate to speculate in light of the many uncertainties (financial, regulatory, research results, competing products) implicit in its business and affairs relating to drug development and commercialization. In light of the staff's comment, the Company undertakes to periodically re-evaluate in future filings the progress of the Company's program to develop and commercialize drug candidates and provide additional details relating to costs, and timing, if and when such factors can reasonably be predicted. Accordingly, the Company believes the additional information sought by the staff in addition to the information previously included in response to the staff's comments regarding TNX-102, the Company's lead drug candidate, either does not exist or is not sufficiently developed or known to be able to be responsibly included in a further amendment.

2. You continue to state in the first bullet point on page 5 and elsewhere that you believe the therapeutic uses you target are new uses, notwithstanding your response to prior comment 8. Please revise.

Response:
Our "strategy" is correctly stated as an overall objective, on page 5. The statement in the first bullet point (and elsewhere) does not conflict with the response to prior comment No. 8 involving our patents and the potential for off-label use to treat FM, which is a specific therapeutic use targeted for the active ingredient that relates to cyclobenzaprine. Accordingly, we do not believe the statement that we desire to pursue new uses of approved drugs, as a general strategy, is inaccurate or misleading and to remove such language would not be consistent with the goal to convey to investors an accurate snapshot of the overall objectives of management. Accordingly, we believe that further changes would be potentially false and misleading in response to the staff's comments.

Drug Delivery Technology, page 11

3. We note your response to prior comment 12. We may have further comment upon resolution of your request for confidential treatment.

Response:

The staff's response is noted.

Intellectual Property, page 14

4. It remains unclear from your response to prior comment 14 whether there any patents or patent applications relating to TNX-201 were transferred to you by Lederman & Co. Please clarify. Also, please revise the statement that "[w]e have been granted numerous patent applications…" to clarify (1) the extent to which you received patents or patent applications as opposed to acquiring them from affiliates or other third parties and (2) the difference between a patent and a patent application.

Response:
We concur with the staff's view that some readers could confuse applications for patents that are pending with issued patents but believe that the common usage of the word "application" and its use in the filing is not material or misleading as it appears in the present filing, particularly in the extensive table that notes issuance jurisdictions and expiration dates and, in the leftmost column of this table, denotes a patent or application for each row shown. We undertake in future filings that the Company will more clearly specify that the technology has been subject to numerous patent applications filed in the United States and abroad, and separately identify the patents that have been issued in the introductory language preceding such table.

No patents or patent applications relating to TNX-201 were transferred to the Company from Lederman & Co. All patent applications and issued patents have been acquired from affiliates, as disclosed elsewhere in the Company's Form 8-K/A, or other third parties, except for the patent applications: PCT/US10/02979 "Methods And Compositions For Treating Symptoms Associated With Post-Traumatic Stress Disorder Using Cyclobenzaprine" and PCT/US 11/01529 "Method for Treating Cocaine Addiction", which were filed by the Company. Accordingly, no additional disclosure is warranted.

Risk Factors, page 20

5. Refer to prior comment 16. It remains unclear how you determined that there is no material risk that the projected sales from 2015 to 2018 will not materialize. Please address the risk that these sales will not materialize in your risk factor disclosure or tell us why you believe that such disclosure is not appropriate.

Response:
In response to the staff's suggestion, we have considered revisions to address any material risk related to the assumption that there will be a significant market-wide increase in the use of all muscle relaxants for the treatment of FM, and reviewed slide 23 of Exhibit 99.02, a third party research report. The Company does not believe it is wholly-dependent upon the assumption published in a third party research report forecast of significant market-wide increases and that the commercialization risks associated with the Company's drugs are adequately set forth, without stating that the third party projected sales in a report filed as an exhibit, could be inaccurate.

Financial Statements and Exhibits, page 55

6. We note that you filed a PDF format exhibit in response to prior comment 22. Please note that unofficial PDF documents may not be submitted to EDGAR without their official ASCII/HTML versions. Refer to section 5.2.3 of Volume II of the EDGAR Filer Manual for guidance. Accordingly, please file an official version of Exhibit 10.20 in the correct format.

Response:
An ASCII/HTML Version of Exhibit No.10.20 has been filed with Amendment No.2.

7. Please address the final clause of prior comment 24, regarding Rule 436.

Response:
We acknowledge the staff's referral to Rule 436 and acknowledge that Rule 436 will require that the written consent of Frost & Sullivan will be required in the event a registration statement or prospectus is filed which references such report or incorporates by reference such report or its conclusions.

The Company hereby acknowledges the following:

- The Company is responsible for the adequacy and accuracy of the disclosures in the filings;
- Staff comments or changes to disclosures in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; and
- The Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please do not hesitate to contact the undersigned if you have any questions or comments. Thank you.

Very truly yours,
/s/ SETH LEDERMAN
Seth Lederman
Chief Executive Officer

Cc: Harvey Kesner, Esq.
Marc Ross, Esq.
James Turner, Esq.